CLAIMS

We claim:

1. A method of breast cancer diagnosis comprising detecting over expression of a gene of a protein found in breast tissue selected from the group consisting of ATP transporter protein, GPCR (G-protein coupled receptor), GPCR (G-protein coupled receptor) 14, hypothetical protein (breast), unc-93, bone marrow stromal cell antigen 2, cadherin EGF LAG seven-pass G-type receptor 1 flamingo (Drosophila) homolog, carcinoembryonic antigen-related cell adhesion molecule 3, carcinoembryonic antigen-related cell adhesion molecule 6, carcinoembryonic antigen-related cell adhesion molecule 8, claudin 7, cleft lip and palate associated membrane transmembrane protein 1, fibroblast growth factor receptor 3, heme oxygenase (decycling) 1, immediate early response 3, mucin 1 transmembrane, NG22, phosphatidylinositol glycan (class Q), similar to CGI-78 protein, clone MGC:4880 IMAGE:3457593, solute carrier family 1 (member 4), solute carrier family 6 (member 8), tetraspan 1, transporter 1 ATP-binding cassette sub-family B (MDR/TAP) and Type I transmembrane receptor (seizure-related protein).

2. A method as in claim 1, wherein the gene comprises a sequence selected from the group consisting of SEQ ID Nos 1-154 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

3. A method as in claim 1, wherein detecting over expression comprises a method selected from the group consisting of detecting a level of mRNA expression, detecting a level of protein expression, and probing for a polypeptide encoded by the gene.

4. A method as in claim 3, wherein the over expressed protein comprises an amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID Nos 1-154 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

5. A method of breast cancer treatment comprising blocking over expression of a gene encoding a secreted or membrane-bound protein found in breast tissue selected from the group consisting of SEQ ID Nos 1-154 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

6. A method of treatment as in claim 5, wherein the gene comprises a sequence selected from the group consisting of SEQ ID Nos 1-154 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

7. A method as in claim 5, wherein the method of treatment comprises a method selected from the group consisting of blocking expression of an mRNA encoded by the gene, blocking translation of the mRNA encoded by the gene, blocking expression of a protein encoded by the gene, blocking the function of the expressed protein, promoting the degradation of the expressed protein and using the protein as a tag to deliver treatment.

8. A method as in claim 7, wherein the method of treatment comprises blocking an mRNA, polypeptide or protein comprising a nucleotide or amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID Nos 1-154 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

9. A method as in claim 1, wherein the over expressed protein is secreted.

10. A method as in claim 1, wherein the over expressed protein is membrane-bound.

11. A method of lung cancer diagnosis comprising detecting over expression of a gene of a protein found in lung tissue selected from the group consisting of over expressed in lung of hypothetical protein, amino acid transporter 2, carboxypeptidase M, and putative G-protein coupled receptor.

12. A method as in claim 11, wherein the gene comprises a sequence selected from the group consisting of SEQ ID Nos 155-184 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

13. A method as in claim 11, wherein detecting over expression comprises a method selected from the group consisting of detecting a level of mRNA expression, detecting a level of protein expression, and probing for a polypeptide encoded by the gene.

14. A method as in claim 13, wherein the over expressed protein comprises an amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID Nos 155-184 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

15. A method of lung cancer treatment comprising blocking over expression of a gene encoding a secreted or membrane-bound protein found in lung tissue selected from the group consisting of SEQ ID Nos 155-184 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

16. A method of treatment as in claim 15, wherein the gene comprises a sequence selected from the group consisting of SEQ ID Nos 155-184 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

17. A method as in claim 15, wherein the method of treatment comprises a method selected from the group consisting of blocking expression of an mRNA encoded by the gene, blocking translation of the mRNA encoded by the gene, and blocking expression of a protein encoded by the gene, blocking the function of the expressed protein, promoting the degradation of the expressed protein and using the protein as a tag to deliver treatment.

18. A method as in claim 17, wherein the method of treatment comprises blocking an mRNA, polypeptide or protein comprising a nucleotide or amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID

Nos 155-184 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

19. A method as in claim 11, wherein the over expressed protein is secreted.

20. A method as in claim 11, wherein the over expressed protein is membrane-bound.

21. A method of colon cancer diagnosis comprising detecting over expression of a gene of a protein found in colon tissue selected from the group consisting of hypothetical protein (colon), cadherin, formyl peptide receptor 1, AE-binding protein 1, solute carrier family 21 (organic anion transporter) member 12, secreted phosphoprotein 1 (osteopontin, bone sialoprotein I), Type I transmembrane protein Fn14, hypoxia-inducible protein 2, alpha-2-glycoprotein 1 zinc, chitinase 3-like1 (cartilage glycoprotein-39) and triggering receptor expressed on myeloid cells 2.

22. A method as in claim 21, wherein the gene comprises a sequence selected from the group consisting of SEQ ID Nos 185-246 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

23. A method as in claim 21, wherein detecting over expression comprises a method selected from the group consisting of detecting a level of mRNA expression, detecting a level of protein expression, and probing for a polypeptide encoded by the gene.

24. A method as in claim 23, wherein the over expressed protein comprises an amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID Nos 185-246 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

25. A method of colon cancer treatment comprising blocking over expression of a gene encoding a secreted or membrane-bound protein found in colon tissue selected from the group consisting of SEQ ID Nos 185-246 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

26. A method of treatment as in claim 25, wherein the gene comprises a s qu nce selected from the group consisting of SEQ ID Nos 185-246 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

27. A method as in claim 25, wherein the method of treatment comprises a method selected from the group consisting of blocking expression of an mRNA encoded by the gene, blocking translation of the mRNA encoded by the gene, and blocking expression of a protein encoded by the gene, blocking the function of the expressed protein, promoting the degradation of the expressed protein and using the protein as a tag to deliver treatment.

28. A method as in claim 27, wherein the method of treatment comprises blocking an mRNA, polypeptide or protein comprising a nucleotide or amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID Nos 185-246 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

29. A method as in claim 21, wherein the over expressed protein is secreted.

30. A method as in claim 21, wherein the over expressed protein is membrane-bound.

31. A method of kidney cancer diagnosis comprising detecting over expression of a gene of a protein found in kidney tissue selected from the group consisting of scavenger receptor class B, adenosine receptor A3, CD97 antigen, APO E-C2 gene, basement membrane-induced gene, integrin alpha 5 (fibronectin receptor, alpha polypeptide), peptide transporter 3, hypothetical protein FLJ22341, solute carrier family 16 (monocarboxylic acid transporters), interleukin 10 receptor alpha, FXYD domain-containing ion transport regulator 5, retinoic acid receptor responder (tazarotene induced) 2, integrin alpha X (antigen CD11C (p150), alpha polypeptide), sema domain seven thrombospondin repeats (type 1 and type 1-like) transmembrane domain (TM) and short cytoplasmic domain (semaphorin) 5B, guanylate binding protein 1 interferon-inducible

67kD, leukocyte immunoglobulin-like receptor subfamily B, discoidin domain receptor family member 2, caveolin 1 caveolae protein 22kD, chloride intracellular channel 1, CD36 antigen (collagen type I receptor, thrombospondin recep), small inducible cytokine A4 (homologous to mouse Mip-1b), lysosomal-associated multispanning membrane protein-5, integrin beta 2 antigen CD18 (p95) lymphocyte funtion-assoc, chemokine (C-X-C motif) receptor 4 (fusin), CD2 antigen (p50) sheep red blood cell receptor and epithelial membrane protein 3.

32. A method as in claim 31, wherein the gene comprises a sequence selected from the group consisting of SEQ ID Nos 247-385 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

33. A method as in claim 31, wherein detecting over expression comprises a method selected from the group consisting of detecting a level of mRNA expression, detecting a level of protein expression, and probing for a polypeptide encoded by the gene.

34. A method as in claim 33, wherein the over expressed protein comprises an amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID Nos 247-385 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

35. A method of kidney cancer treatment comprising blocking over expression of a gene encoding a secreted or membrane-bound protein found in kidney tissue selected from the group consisting of SEQ ID Nos 247-385 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

36. A method of treatment as in claim 35, wherein the gene comprises a sequence selected from the group consisting of SEQ ID Nos 247-385 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

37. A method as in claim 35, wherein the method of treatment comprises a method selected from the group consisting of blocking expression of an mRNA encoded by the

gene, blocking translation of the mRNA encoded by the gene, blocking expression of a protein encoded by the gene, blocking the function of the expressed protein, promoting the degradation of the expressed protein and using the protein as a tag to deliver treatment.

38. A method as in claim 37, wherein the method of treatment comprises blocking an mRNA, polypeptide or protein comprising a nucleotide or amino acid sequence encoded by a gene selected from the group of genes having nucleic acid sequences of SEQ ID Nos 247-385 in the file "14dec03.ST25.txt" (generated by PatentIn3.2) attached to this application and incorporated by reference.

39. A method as in claim 31, wherein the over expressed protein is secreted.

40. A method as in claim 31, wherein the over expressed protein is membrane-bound.

41. An antibody or binding portion of an antibody that specifically binds a protein found in breast tissue, wherein the protein is selected from the group consisting of ATP transporter protein, GPCR (G-protein coupled receptor), GPCR (G-protein coupled receptor) 14, hypothetical protein (breast), unc-93, bone marrow stromal cell antigen 2, cadherin EGF LAG seven-pass G-type receptor 1 flamingo (Drosophila) homolog, carcinoembryonic antigen-related cell adhesion molecule 3, carcinoembryonic antigen-related cell adhesion molecule 6, carcinoembryonic antigen-related cell adhesion molecule 8, claudin 7, cleft lip and palate associated membrane transmembrane protein 1, fibroblast growth factor receptor 3, heme oxygenase (decycling) 1, immediate early response 3, mucin 1 transmembrane, NG22, phosphatidylinositol glycan (class Q), similar to CGI-78 protein, clone MGC:4880 IMAGE:3457593, solute carrier family 1 (member 4), solute carrier family 6 (member 8), tetraspan 1, transporter 1 ATP-binding cassette sub-family B (MDR/TAP) and Type I transmembrane receptor (seizure-related protein).

42. A method of breast cancer diagnosis or prognosis comprising contacting an antibody or binding portion of an antibody of claim 41, with the over expressed protein for which the antibody or binding portion thereof is specific.

43. A method of breast cancer treatment comprising blocking an over expressed protein selected from the group consisting of ATP transporter protein, GPCR (G-protein coupled receptor), GPCR (G-protein coupled receptor) 14, hypothetical protein (breast), unc-93, bone marrow stromal cell antigen 2, cadherin EGF LAG seven-pass G-type receptor 1 flamingo (Drosophila) homolog, carcinoembryonic antigen-related cell adhesion molecule 3, carcinoembryonic antigen-related cell adhesion molecule 6, carcinoembryonic antigen-related cell adhesion molecule 8, claudin 7, cleft lip and palate associated membrane transmembrane protein 1, fibroblast growth factor receptor 3, heme oxygenase (decycling) 1, immediate early response 3, mucin 1 transmembrane, NG22, phosphatidylinositol glycan (class Q), similar to CGI-78 protein, clone MGC:4880 IMAGE:3457593, solute carrier family 1 (member 4), solute carrier family 6 (member 8), tetraspan 1, transporter 1 ATP-binding cassette sub-family B (MDR/TAP) and Type I transmembrane receptor (seizure-related protein), with an antibody or binding portion thereof specific for said protein.

44. An antibody or binding portion of an antibody that specifically binds a protein found in lung tissue, wherein the protein is selected from the group consisting of over expressed in lung of hypothetical protein, amino acid transporter 2, carboxypeptidase M, and putative G-protein coupled receptor.

45. A method of lung cancer diagnosis or prognosis comprising contacting an antibody or binding portion of an antibody of claim 44, with the over expressed protein for which the antibody or binding portion thereof is specific.

46. A method of lung cancer treatment comprising blocking an over expressed protein selected from the group consisting of over expressed in lung of hypothetical protein, amino acid transporter 2, carboxypeptidase M, and putative G-protein coupled receptor, with an antibody or binding portion thereof specific for said protein.

47. An antibody or binding portion of an antibody that specifically binds to a protein found in colon tissue, wherein the protein is selected from the group consisting of hypothetical protein (colon), cadherin, formyl peptide receptor 1, AE-binding protein 1, solute carrier

family 21 (organic anion transporter) member 12, secreted phosphoprotein 1 (osteopontin, bone sialoprotein I), Type I transmembrane protein Fn14, hypoxia-inducible protein 2, alpha-2-glycoprotein 1 zinc, chitinase 3-like1 (cartilage glycoprotein-39) and triggering receptor expressed on myeloid cells 2.

48. A method of colon cancer diagnosis or prognosis comprising contacting an antibody or binding portion of an antibody of claim 47, with the over expressed protein for which the antibody or binding portion thereof is specific

49. A method of colon cancer treatment comprising blocking an over expressed protein selected from the group consisting of hypothetical protein (colon), cadherin, formyl peptide receptor 1, AE-binding protein 1, solute carrier family 21 (organic anion transporter) member 12, secreted phosphoprotein 1 (osteopontin, bone sialoprotein I), Type I transmembrane protein Fn14, hypoxia-inducible protein 2, alpha-2-glycoprotein 1 zinc, chitinase 3-like1 (cartilage glycoprotein-39) and triggering receptor expressed on myeloid cells 2.

50. An antibody or binding portion of an antibody that specifically binds to a protein found in kidney tissue, wherein the protein is selected from the group consisting of scavenger receptor class B, adenosine receptor A3, CD97 antigen, APO E-C2 gene, basement membrane-induced gene, integrin alpha 5 (fibronectin receptor, alpha polypeptide), peptide transporter 3, hypothetical protein FLJ22341, solute carrier family 16 (monocarboxylic acid transporters), interleukin 10 receptor alpha, FXYD domain-containing ion transport regulator 5, retinoic acid receptor responder (tazarotene induced) 2, integrin alpha X (antigen CD11C (p150), alpha polypeptide), sema domain seven thrombospondin repeats (type 1 and type 1-like) transmembrane domain (TM) and short cytoplasmic domain (semaphorin) 5B, guanylate binding protein 1 interferon-inducible 67kD, leukocyte immunoglobulin-like receptor subfamily B, discoidin domain receptor family member 2, caveolin 1 caveolae protein 22kD, chloride intracellular channel 1, CD36 antigen (collagen type I receptor, thrombospondin recep), small inducible cytokine A4 (homologous to mouse Mip-1b), lysosomal-associated multispanning membrane protein-5, integrin beta 2 antigen CD18 (p95) lymphocyte funtion-assoc, chemokine (C-X-C motif)

receptor 4 (fusin), CD2 antigen (p50) sheep red blood cell receptor and epithelial membrane protein 3.

51. A method of kidney cancer diagnosis or prognosis comprising contacting an antibody or binding portion of an antibody of claim 50, with the over expressed protein for which the antibody or binding portion thereof is specific.

52. A method of kidney cancer treatment comprising blocking an over expressed protein selected from the group consisting of scavenger receptor class B, adenosine receptor A3, CD97 antigen, APO E-C2 gene, basement membrane-induced gene, integrin alpha 5 (fibronectin receptor, alpha polypeptide), peptide transporter 3, hypothetical protein FLJ22341, solute carrier family 16 (monocarboxylic acid transporters), interleukin 10 receptor alpha, FXYD domain-containing ion transport regulator 5, retinoic acid receptor responder (tazarotene induced) 2, integrin alpha X (antigen CD11C (p150), alpha polypeptide), sema domain seven thrombospondin repeats (type 1 and type 1-like) transmembrane domain (TM) and short cytoplasmic domain (semaphorin) 5B, guanylate binding protein 1 interferon-inducible 67kD, leukocyte immunoglobulin-like receptor subfamily B, discoidin domain receptor family member 2, caveolin 1 caveolae protein 22kD, chloride intracellular channel 1, CD36 antigen (collagen type I receptor, thrombospondin recep), small inducible cytokine A4 (homologous to mouse Mip-1b), lysosomal-associated multispanning membrane protein-5, integrin beta 2 antigen CD18 (p95) lymphocyte funtion-assoc, chemokine (C-X-C motif) receptor 4 (fusin), CD2 antigen (p50) sheep red blood cell receptor and epithelial membrane protein 3.